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Conference Abstract

Freshwater Biodiversity Platform (FBP): an Integrated Information Management System of Freshwater Ecosystem for the Conservation and Sustainable Use of Biodiversity

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Abstract

Since the Nagoya Protocol on Access to genetic resources and Benefit Sharing (ABS) came into force in 2014, the conservation and assurance of national biodiversity has been internationally stressed. The Government of South Korea is exercising significant efforts to integrate and manage the information pertaining to biological resources in line with this global trend. However, connecting and sharing biodiversity data has certain challenges because the existing databases and information systems are being operated using different standards.

In the present study, we established an integrated management system for freshwater biodiversity information, the Freshwater Biodiversity Platform (FBP), to support the conservation and sustainable use of biodiversity. This platform allows the management of various types of biodiversity data, such as occurrences, habitats and genetics, for freshwater species inhabiting South Korea. The data fields are based on a global biodiversity data standard, Darwin Core, and national biodiversity standards of South Korea in order to share our data more efficiently, both nationally and internationally. It is important to note that the platform deals with information related to the utilization of

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biological resources as well as information representing the national biodiversity. We have collected bibliographical data, such as papers and patents, from databases, including information on the use of biological resources. The data have been refined by applying a national species list of South Korea and ontology terms in (MeSH) to compile valuable information for biological industries. Furthermore, our platform is open source and is compatible with multiple language packs to facilitate the availability of biodiversity data for other countries and institutions.

Currently, the Freshwater Biodiversity Platform is being used to collect and standardize various types of existing freshwater biodiversity data to build foundations for data management. Based on these data, we will improve the platform by adding new systems that can analyze and release data for public access. This platform will provide integrated information on freshwater species from the Korean Peninsula to the world and contribute to the conservation and sustainable use of biological resources.

Keywords

Freshwater Biodiversity Platform, conservation, sustainable use, Nagoya Protocol

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